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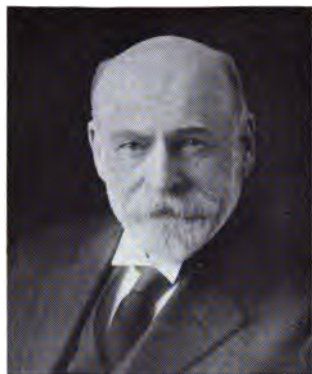
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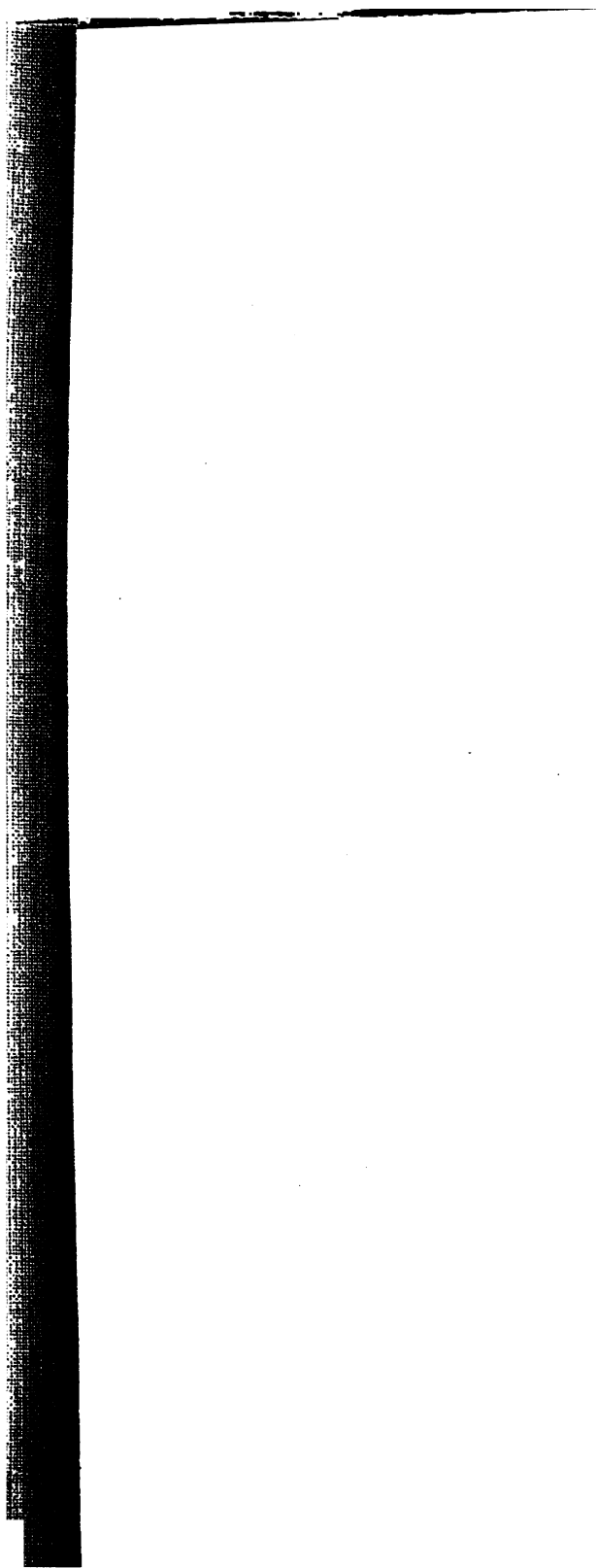
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## NOTES ON THE PRESENT CONDITION OF THE HODGKINSON GOLD FIELD.

BY

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*Government Geologist.*

(Issued under the Authority of the Honourable Robert Philp, Esquire,  
Minister for Mines.)



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1896.



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## PREFACE.

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THE following Notes on the Hodgkinson were made during the steamer and rail portions of a recent journey to the Palmer. The decadence of the Hodgkinson is a subject on which I have spent much thought, and it seemed to me that a few days might be profitably employed in putting on paper the actual state of the case. On my return the notes were submitted to the Honourable the Minister for Mines, who ordered them to be printed for public information.

R.L.J.

Geological Survey Office,  
Brisbane, 28th October, 1896.



[illegible]

## NOTES ON THE PRESENT CONDITION OF THE HODGKINSON GOLD FIELD.

The Hodgkinson is, in my opinion, most undeservedly a "neglected goldfield." Its present condition is much the same as that which was described in my Report of 1884,\* except that a very few of the mines have been carried on in a small way, as will be seen from the Annual Reports of the Department of Mines. The field was practically abandoned between 1880 and 1883.

The data made use of in these "Notes" are chiefly taken from my Report of 1884, brought up to the end of 1895 by the aid of the statistics given in the Annual Reports of the Department of Mines, and refer only to the central portion of the field—i.e., around Thornborough and Kingsborough, and exclusive of the mines described under the heads of "Down the River," "Eastern Hodgkinson," and "Northcote."

By way of text, I give, to begin with, a tabular list of the results of crushings, leaving out only a few small ones which were mere trials. Figures are, as a rule, dry reading, but I venture to say that almost every item of the table will repay careful perusal and consideration.

### CENTRAL HODGKINSON CRUSHINGS.

	TOTAL CRUSHINGS.		AVERAGE OF TOTAL CRUSHINGS.	LAST CRUSHING.	BEST CRUSHING.
	Stone.	Gold.	Gold per ton.	Gold per ton.	Gold per ton.
	Tons cwt.	Oz. dwt. gr.	Oz. dwt. gr.	Oz. dwt. gr.	Oz. dwt. gr.
Tasmanian ... ..	1,911 10	2,586 12 0	1 7 1	0 8 20	4 17 8
Black Ball ... ..	7,185 15	6,303 4 0	0 17 13	0 11 13	2 1 13
Homeward Bound ...	6,077 5	7,218 14 0	1 3 18	0 4 23	2 15 10
Outward Bound ...	270 4	196 3 12	0 14 12	0 13 13	1 3 4
North Star ... ..	1,441 3	1,297 3 0	0 18 0	0 13 20	2 1 4
Vulcan ... ..	1,697 13	2,070 12 5	1 4 9	0 18 7	† 2 9 6
Britannia ... ..	872 10	887 17 2	1 0 8	0 12 5	3 6 19
Caledonia ... ..	2,582 15	3,199 8 0	1 4 18	0 11 16	2 12 10
Mark Twain ... ..	2,476 0	3,580 9 0*	1 8 22	0 16 5	3 9 21
Lady Mary ... ..	1,137 0	2,532 11 0	2 14 3	1 3 26	6 9 5
Lady Catherine ...	727 5	1,074 0 0	1 9 13	0 18 4	3 0 0
Cardigan ... ..	1,829 2	1,876 10 0	1 0 12	0 9 20	4 14 1
Von Moltke ... ..	331 0	353 6 0	1 1 9	1 0 13	2 15 17
Bismarck ... ..	211 0	491 16 0	2 6 15	1 18 14	5 10 0
Emperor ... ..	157 10	342 6 0	2 13 9	1 0 13	4 7 6
Lady Ann ... ..	252 5	239 1 2	1 2 21	1 4 8	1 9 19
Providence ... ..	304 17	437 2 0	1 8 16	2 10 0	2 1 23
Waterford ... ..	205 10	469 14 0	2 5 16	2 6 16	7 10 0
Black Prince ... ..	415 15	1,277 16 12	3 1 11	1 6 22	5 7 14
Rob Roy ... ..	2,689 0	3,040 3 0	1 2 21	0 15 0	4 12 10
Gustavus Adolphus ...	971 5	1,217 3 0	1 5 2	1 7 2	2 4 3
Tyrconnel ... ..	12,781 15	18,831 16 18	1 9 11	0 14 1	3 12 8
Commodore ... ..	1,122 11	1,468 3 0	1 6 3	0 12 11	2 11 12
Lizzie Redmond ...	1,854 0	2,664 10 0	1 0 19	0 16 18	3 15 21
Hero ... ..	1,082 0	1,645 9 0	1 10 9	1 6 16	3 11 15
Columbia ... ..	584 3	830 4 0	1 8 10	1 0 12	2 12 6
El Dorado ... ..	177 12	639 14 3	3 12 8	0 9 0	5 17 2
Honest Lawyer ...	570 14	720 15 12	1 7 3	0 19 13	4 11 16

\* Reprinted in 1896. Brisbane: Government Printer.

† Exclusive of one crushing of 24 cwt., which gave 17 oz. 6 dwt. 5 gr.

## CENTRAL HODGKINSON CRUSHINGS—continued.

	TOTAL CRUSHINGS.		AVERAGE OF TOTAL CRUSHINGS.	LAST CRUSHING.	BEST CRUSHING.
	Stones.	Gold.	Gold per ton.	Gold per ton.	Gold per ton.
	Tons cwt.	Oz. dwt. gr.	Oz. dwt. gr.	Oz. dwt. gr.	Oz. dwt. gr.
Henry Grattan ...	235 2	1,518 1 0	6 9 3	1 18 12	14 10 0
Fourth of July ...	619 9	744 11 8	1 4 1	1 3 6	6 3 5
Mowbray ...	500 0	1,057 8 0	2 2 7	*0 8 1	6 8 22
Alliance ...	174 19	286 16 0	1 12 19	1 9 11	3 13 19
Empress of India ...	748 5	2,013 5 0	2 13 23	1 5 11	6 4 11
Cornwall and Devon ...	362 5	1,097 16 0	3 0 14	1 0 8	11 18 16
Great Northern ...	279 15	360 3 0	1 5 18	0 12 0	3 1 4
Explorer ...	651 15	2,057 9 0	4 17 6	2 6 8	8 15 0
Tichbourne ...	985 7	1,828 2 0	1 17 2	2 1 23	3 14 5
True Blue ...	33 19	78 6 0	2 6 3	0 11 11	3 11 22
Pioneer ...	2,033 10	3,759 9 0	1 16 23	0 16 0	5 17 8
Hope ...	149 3	276 2 6	1 17 0	2 10 22	3 17 3
Idaho ...	196 15	287 13 0	1 9 5	1 7 12	3 0 0
Maori Chief ...	251 10	619 0 0	2 9 5	1 7 10	3 10 17
Kingsborough ...	1,024 3	4,947 15 0	4 16 15	3 5 15	19 10 22
Ace of Hearts ...	345 12	378 17 0	1 1 21	0 19 5	2 5 17
Aristocrat ...	143 10	141 10 0	0 19 7	0 18 18	1 10 18
Albion ...	147 7	82 11 0	0 11 5	0 11 10	1 0 0
Birmingham ...	60 0	125 19 0	2 1 23	1 15 15	4 3 19
Black Diamond...	236 10	164 5 0	0 13 21	0 18 11	1 0 18
Contest ...	117 0	147 15 0	1 5 6	0 12 5	2 6 16
Cresus ...	102 0	231 16 0	2 5 10	2 4 0	2 16 16
Eleanor ...	197 0	311 3 0	1 11 14	1 10 18	1 17 21
Eureka ...	661 13	1,071 6 0	1 12 9	0 13 3	3 12 13
Forget-me-Not ...	310 13	855 6 0	2 15 1	1 14 12	4 13 18
Finland ...	56 10	40 10 0	0 14 8	2 0 0	2 0 0
Four-leaved Shamrock	54 0	320 10 0	5 18 17	5 11 8	6 3 23
Great Britain ...	2,534 15	3,171 16 0	1 5 1	0 11 11	4 8 10
General Grant ...	1,031 5	1,402 8 0	1 7 4	0 19 7	4 0 0
Hand-in-Hand ...	74 3	102 18 0	1 7 18	1 17 22	1 17 22
Hibernia ...	107 8	121 17 0	1 2 22	1 16 8	1 9 12
Hit or Miss ...	217 17	420 2 0	1 18 13	2 19 8	3 14 6
Hope of the North ...	1,708 10	1,795 11 0	1 0 23	0 11 18	1 19 0
Hope On ...	96 10	179 10 0	1 17 5	1 13 12	4 2 7
Nil Desperandum ...	96 0	287 17 0	2 19 23	0 10 14	6 5 20
Last Chance ...	87 0	137 3 0	1 11 1	1 3 13	3 5 22
Little Nell ...	119 10	125 10 0	1 1 0	1 0 0	2 9 1
Lissa ...	230 10	304 19 0	1 6 11	1 8 19	2 0 18
Mary ...	81 10	147 6 0	1 16 3	2 1 6	3 3 0
Maitland ...	42 14	40 11 0	0 19 7	1 6 1	1 6 1
Marseillaise ...	46 2	67 7 12	1 9 5	0 17 12	1 19 9
Maid of Australia ...	35 0	73 5 0	2 10 20	2 4 2	2 4 2
Mistake ...	23 0	42 8 0	1 16 20	2 10 16	2 10 16
Mount Pleasant ...	141 6	120 10 0	0 17 1	1 0 0	1 18 2
Philosopher ...	308 10	213 12 0	0 13 20	0 14 9	1 2 4
Perseverance ...	111 10	130 12 0	1 3 10	0 4 5	1 2 19
Queen ...	131 0	89 18 0	0 13 6	0 15 17	1 9 6
Ranger ...	72 0	104 10 0	1 9 1	0 16 6	3 1 8
Shamrock ...	136 0	232 9 0	1 14 4	1 2 22	1 15 6
Sir Arthur Kennedy ...	52 5	54 7 0	1 0 19	1 2 20	1 13 13
Southern Cross ...	92 2	94 16 0	1 0 14	0 9 20	2 17 18
Star of the South ...	179 17	726 8 12	4 0 18	0 18 0	6 19 6
Sunbeam ...	64 5	145 11 12	2 5 7	2 5 10	2 15 14
Triumph ...	121 10	170 14 0	1 8 2	4 12 7	4 12 7
Victoria ...	371 17	354 7 12	0 19 1	0 9 6	2 10 5
Waverley ...	111 10	158 5 0	1 8 9	1 0 9	2 3 21
Welcome ...	79 0	212 2 0	2 13 7	1 5 0	5 0 8
Wait-a-While ...	160 7	115 16 0	0 14 17	0 5 16	1 17 12
Wiltshire ...	17 16	53 5 0	2 19 19	2 16 7	3 1 7

\* Last crushing but one. The last gave 35 oz. 12 dwt., but the quantity of stone is not stated.

Comment on the above figures is almost unnecessary, but by way of pointing the moral I add a few notes on the greater number of the claims given in the list.

*The Tasmanian* had 27 crushings, amounting to 1,911 tons, and giving an average of 1 oz. 7 dwt. 1 gr. of gold per ton. The first crushing (52 tons) was the best, giving 4 oz. 17 dwt. 8 gr. per ton. Five crushings followed, varying from  $1\frac{1}{4}$  to nearly 3 oz. Next was a small crushing (18 tons), giving only 13 dwt. 1 gr. per ton. It was followed by three crushings giving over  $1\frac{1}{4}$  oz., and one (the 11th) over 1 oz. The 12th fell a little under 1 oz., and the 13th was as much over. The 14th fell nearly to  $\frac{1}{2}$  oz. The 15th was a little under 1 oz., and the 16th a little over. The 17th was over  $1\frac{1}{4}$  oz. The 18th was only 5 dwt. 8 gr. The 19th was a little under  $\frac{1}{2}$  oz. The record of the next is imperfect, the quantity of stone having been omitted. (I assume that it was 77 tons 1 cwt. for the sake of striking an average.) The 21st was a little under 1 oz.; the 22nd under  $\frac{1}{2}$  oz. The 23rd and 24th gave 1 oz. 3 dwt. 1 gr. and 1 oz. 2 dwt. 9 gr. respectively; the 25th, 7 dwt. 7 gr.; the 26th, 18 dwt. 23 gr., and the last 8 dwt. 20 gr. It is not easy to see why the mine was abandoned unless the stone had pinched out. The last crushing was comparatively poor, but a still poorer had been followed by very good ones, giving over 1 oz. to the ton.

*The Black Ball* has been worked almost continuously from 1877 to the present day. It has crushed 6,077 tons 5 cwt. for 7,218 oz. 14 dwt.—an average of 1 oz. 3 dwt. 8 gr. per ton. The yield has maintained a steady average, the highest (in 1894) being only 1 oz. 14 dwt.

*The Homeward Bound* had, up to the end of 1883, 30 crushings, amounting to 5,546 tons, and averaging 1 oz. 4 dwt. 3 gr. per ton. The best crushing was the 5th (279 tons), which gave 2 oz. 15 dwt. 10 gr. per ton. For three years the crushings rarely fell under 1 oz. The 28th crushing was 1 oz. 7 dwt.; the 29th, 7 dwt. 12 gr.; and the 30th, 10 dwt. The crushings between 1883 and the end of 1895 bring the total of tons up to 6,077.25, and of gold up to 7,218 oz. 14 dwt.—an average of 1 oz. 3 dwt. 18 gr. per ton. From 1884 to 1895 inclusive (there were none from 1887 to 1891, nor from 1891 to 1894) the average was 19 dwt. 16 gr. per ton.

*The North Star* turned out up to the end of 1883, 1,407 tons (in 25 crushings) averaging 18 dwt. 4 gr. per ton. The 4th was the best crushing, giving 2 oz. 1 dwt. 4 gr. per ton. The 18th to the 25th crushings averaged only 11 dwt. 23 gr., the 25th being as low as 5 dwt. 10 gr. The depth of the workings was trifling, and there was no driving to speak of. Crushings of 9 and 25 tons are recorded in 1884 and 1885, giving respectively 1 oz. 1 dwt. 10 gr. and 13 dwt. 20 gr. per ton; the totals being brought up to 1,441 tons 3 cwt., and 1,297 oz. 3 dwt., an average of 18 dwt. of gold per ton.

*The Vulcan* had, up to the end of 1893, 19 crushings, amounting to 1,417.35 tons, averaging 1 oz. 5 dwt. 10 gr. One crushing (of 130 tons) gave 2 oz. 9 dwt. 6 gr., and another (of 24 cwt.), 17 oz. 6 dwt. 5 gr. per ton. The two last small crushings, however, gave only 16 dwt. 7 gr. and 5 dwt. 23 gr. respectively. The 13th crushing had fallen even a few grains lower, to be followed by four which averaged over 1 oz. In 1884 the crushings (26 tons 3 cwt.) averaged only 4 dwt. 15 gr. In 1885 the average was 1 oz. 4 dwt. 23 gr. In 1886,

1 oz. 1 dwt. 9 gr. In 1887, 13 dwt. 18 gr. In 1891, 1 oz. 7 dwt. 21 gr.; and in 1893, 18 dwt. 7 gr. The total crushings amount to 1,697 tons 13 cwt., yielding 2,070 oz. 12 dwt. 5 gr.—an average of 1 oz. 4 dwt. 9 gr. per ton.

*The Britannia* had 19 crushings, before the end of 1882, amounting to 867½ tons, and yielding 1 oz. 10 gr. per ton. The best crushing (4th) gave 3 oz. 6 dwt. 19 gr., and the last 1 oz. 4 dwt. 22 gr. per ton. The mine was reopened in 1884, and a crushing of 5 tons yielded gold at the rate of 12 dwt. 5 gr. per ton. The company does not appear to have recovered from the effects of a few comparatively poor crushings (a little under ½ oz.) preceding the last.

*The Mark Twain* had 27 crushings up to the end of 1881, amounting to 2,242½ tons, and yielding 1 oz. 10 dwt. 17 gr. per ton. The first (111½ tons) was the best, giving 3 oz. 9 dwt. 21 gr. The last gave 19 dwt. 11 gr., and there were few under 1 oz. The depth of the shaft was only 146 feet. The shoot of golden stone dipped away rapidly from the shaft, and hence it was necessary to drive levels from the shaft to catch it. This method being uneconomical, another shaft was commenced, but, I understand, not finished. The shoot of stone which gave the 3,443½ oz. was not exhausted, and, beyond the levels to connect the shaft with the shoot, no exploring work was done. The mine was reopened in 1885, and in that year two crushings of 104½ and 47 tons gave respectively 9 dwt. 22 gr. and 8 dwt. 2 gr. per ton. The last crushing (1886) showed a marked improvement, viz., 16 dwt. 5 gr. per ton.

*The Lady Mary*, up to the end 1880, averaged 2½ oz. from 13 crushings, amounting to 1,110 tons. The first crushing (50 tons) was the best, giving 6 oz. 9 dwt. 5 gr. per ton. Only four of the others (9th, 10th, 12th, and 13th) got below 1 oz. I was informed that the quartz did not run out, but the gold died out of it. How far this statement is founded on experience may be judged from the fact that the 11th crushing (192 tons) gave 2 oz. 4 dwt. 14 gr., while the 12th (38 tons) gave 8 dwt. 10 gr., and the 13th and last (23 tons) gave 11 dwt. 8 gr. per ton. Though the mine could not live up to the level of the first crushing it was never a poor mine. Crushings amounting to 27 tons are recorded in 1887, and although the yield of gold averaged 1 oz. 3 dwt. 26 gr., the working was discontinued.

*The Lady Catherine* had, up to the end of 1883, ten crushings, amounting to 584½ tons, and averaging 1 oz. 11 dwt. 18 gr. The best was 3 oz. and the worst was over 1 oz. The last was 1 oz. 3½ dwt. The shaft was 230 feet deep. Except for driving to connect the known shoot with the shaft, no exploring has been done. A crushing of 112½ tons in 1884, and one of 28½ tons in 1885, gave respectively 1 oz. 1 dwt. 9 gr. and 18 dwt. 14 gr. per ton. The totals are:—stone crushed, 727½ tons; gold, 1,074 oz.; average, 1 oz. 9 dwt. 13 gr. per ton.

*The Cardigan* had, up to March, 1880, 9 crushings of 1,455 tons, averaging 1 oz. 2 dwt. 10 gr. The 2nd (101 tons) gave an average of 4 oz. 14 dwt. 1 gr. There were only two crushings under ½ oz.—viz., the 7th (4 dwt. 22 gr.) and the last (9 dwt. 14 gr.) In 1885 and 1886 there were crushings amounting to 120 and 254 tons, averaging 19 dwt. 16 gr. and 9 dwt. 20 gr. respectively. No work has been done since 1886. The total amount of stone crushed is 1,829 tons 2 cwt., and the yield 1,876½ oz., an average of 1 oz. 12 gr. of gold per ton.

*The Von Moltke* had 9 crushings, amounting to 331 tons, and averaging 1 oz. 1 dwt. 9 gr. The last crushing was 1 oz. 13 gr. The previous crushing (2 oz. 15 dwt. 17 gr.) was the best. The mine has not been worked since 1880.

*The Bismarck* had 14 crushings prior to January, 1883, amounting to 200½ tons, and averaging 2 oz. 7 dwt. 1 gr. The last crushing gave 3½ oz. per ton. The 9th was the best, giving 5½ oz. The mine was re-opened in 1885, and a crushing of 10½ tons gave 1 oz. 18 dwt. 4 gr. of gold per ton. The totals are now 211 tons for 491 oz. 16 dwt., = 2 oz. 6 dwt. 15 gr. per ton.

*The Emperor* had an average of 2 oz. 3 dwt. 11 gr. from 11 crushings, amounting to 157½ tons. The best (7th) was 4 oz. The last (January, 1880) was 1 oz. 13 gr.

*The Lady Ann* is a small reef, which has been worked almost entirely in open surface cuttings. It crushed, up to the end of 1880, 229½ tons, averaging 1 oz. 2 dwt. 11 gr. The yield was very steadily about 1 oz. per ton. The mine was reopened in 1885, and 23 tons of stone gave 23 oz. of gold, an average of 1 oz. 4 dwt. 8 gr. per ton. The totals now stand as follows:—Stone crushed, 252 tons 5 cwt.; yield of gold, 299 oz. 1 dwt. 2 gr. Average, 1 oz. 2 dwt. 21 gr. per ton.

*The Providence* had, up to April, 1882, 9 crushings, amounting to 302 tons 17 cwt. The average was 1 oz. 8 dwt. 11 gr. The first crushing (46 tons) was the best (2 oz. 1 dwt. 23 gr.). The last gave 1 oz. 7 dwt. 6 gr. In 1885, 2 tons yielded 5 oz. of gold. This was the best of all the crushings, and, strange to say, the last. The totals are now:—stone, 30½ tons 17 cwt.; gold, 437 oz. 2 dwt., = 1 oz. 8 dwt. 16 gr. per ton.

*The Waterford*, 14 crushings, average 2 oz. 5 dwt. 16 gr. Best (6th), 7½ oz. Last, 2 oz. 6 dwt. 16 gr. Abandoned in 1883.

*The Black Prince*, 18 crushings, averaging 3 oz. 1 dwt. 11 gr. from a total of 415½ tons. After several crushings over 4 oz., and two over 5 oz., the yield fell, in 1880, to 1 oz. 6 dwt. 22 gr., and the mine was abandoned.

*The Rob Roy* had, up to August, 1883, 30 crushings, averaging 1 oz. 3 dwt. 1 gr. from a total of 2,668 tons 6 cwt. The second crushing (4 oz. 12 dwt. 10 gr.) was the best. Only three (21st, 26th, and 27th) ever fell below ½ oz. The last (24½ tons) was only 10 dwt. 8 gr., but the two previous gave about 1 oz. A crushing of 15 tons 7 cwt. in 1884 gave an average of 6 dwt. 9 gr., and another of 5 tons in 1886 gave 15 dwt. per ton. The mine was abandoned because the shaft had been sunk in a bad position for economical working. The totals are now as follows:—Stone crushed, 2,689 tons; gold, 3,080 oz. 3 dwt. Average, 1 oz. 2 dwt. 21 gr. per ton.

*The Gustavus Adolphus* had 10 crushings up to January, 1883, amounting to 947 tons 12 cwt., and averaging 1 oz. 5 dwt. The first and best crushing was 2 oz. 4 dwt. 3 gr. The third, sixth, and seventh were under 1 oz.; the ninth was over 1 oz.; but the last (9 tons 2 cwt.) was only 4½ dwt. In 1885, 23 tons 13 cwt. were crushed for a yield of 1 oz. 7 dwt. 2 gr., and the mine was abandoned. The totals are now:—Stone crushed, 971 tons 5 cwt.; gold, 1,217 oz. 3 dwt. Average per ton, 1 oz. 5 dwt. 2 gr.

*The Tyrconnel* was worked to a depth of 430 feet, and had yielded, up to August, 1883, 10,775 tons 14 cwt. of stone, averaging 1 oz. 12 dwt. 13 gr., chiefly from above the 340-foot level. The best crushing was 3 oz. 12 dwt. 8 gr., and the last 15 dwt. 15 gr. Sinking the shaft 74 feet from the last payable level seems to have been the extent of the work done in search of the good stone after the various owners had taken 17,493 oz. of gold out of the mine. In 1884, 661 tons 19 cwt. of stone gave 14 dwt. 8 gr., and in 1885, 1,083 tons 7 cwt. gave 12 dwt. 23 gr. per ton. Roughly speaking, £55,000 worth of gold had been won, and yet there was no reserve to carry on "dead work." Since 1885 the mine has been carried on in a feeble way (except in 1888-9, when nothing was done). In 1894, 7 tons gave 1 oz. 6 dwt. 3 gr. per ton. The crushings of 57 tons in 1895 (the last recorded) gave 14 dwt. 1 gr. per ton. The totals now stand thus:—Stone crushed, 12,751 tons 15 cwt.; gold, 18,831 oz. 16 dwt. 18 gr.; average per ton, 1 oz. 9 dwt. 11 gr.

*The Commodore* had 22 crushings of 1,093 tons 18 cwt., averaging 1 oz. 6 dwt. 14 gr. The best crushing was 2 oz. 11 dwt. 12 gr. The two last (39½ and 28½ tons) were only 13 dwt. 12 gr. and 12 dwt. 11 gr., but the two previous ones had been well over 1 oz. The mine was abandoned in 1884.

*The Lizzie Redmond* had, up to August, 1883, 15 crushings, amounting to 1,326 tons 18 cwt., averaging 1 oz. 14 dwt. 7 gr. The first and best crushing was 3 oz. 15 dwt. 21 gr. The ninth was 3 oz. 9 gr. The last was only 12 dwt. 7 gr., but the four preceding had been well over 1 oz. The deepest working was 50 feet. In 1883, after August, 85 tons 13 cwt. averaged 1 oz. 9 gr. The crushings of 1884 (two) and 1885 gave 10 dwt. 5 gr., 19 dwt. 17 gr., and 16 dwt. 18 gr. respectively. The mine does not appear to have been worked since 1885. The totals are now:—Stone crushed, 1,854 tons; gold, 2,664½ oz.; average, 1 oz. 8 dwt. 19 gr. per ton.

*The Hero* had, up to May, 1883, 10 crushings of 826 tons, averaging 1 oz. 12 dwt. 20 gr. The first was good (3 oz. 4 dwt. 6 gr.), but the fourth was even better (3 oz. 11 dwt. 15 gr.). The last (28 tons) was only 6 dwt. 3 gr. This and the second (12 dwt. 17 gr.) were the only poor crushings. There were further crushings in 1884, 1885, 1886, 1890, 1891, and 1893. Only in 1890 did the yield fall below 1 oz. The yields of 1891 and 1893 were, respectively, 2 oz. 4 dwt. 6 gr. and 1 oz. 6 dwt. 16 gr. The totals are now:—Stone crushed, 1,082 tons 14 cwt.; gold, 1,645 oz. 9 dwt.; average, 1 oz. 10 dwt. 9 gr. per ton.

*The Columbia* had 11 crushings of 584 tons 3 cwt., averaging 1 oz. 8 dwt. 10 gr. The best crushing (6th) was 2 oz. 12 dwt. 6 gr. The eighth and ninth were 2 oz. 5 dwt. 5 gr. and 2 oz. 8 dwt. 18 gr. per ton respectively. The tenth was 13 dwt. 19 gr., and the last (1885) 1 oz. 12 gr. The totals now stand as follows:—Stone crushed, 584 tons 3 cwt.; gold, 830 oz. 4 dwt. 20 gr.; average, 1 oz. 8 dwt. 10 gr.

*El Dorado*, before it was abandoned in 1879, had 8 crushings of 167 tons 12 cwt., for an average of 3 oz. 15 dwt. 19 gr. The last crushing was poor—viz., 1 oz. 12 dwt. 20 gr.; but the one before had given 5 oz. 8 dwt. 7 gr. The first had given 3 oz. 15 dwt. 16 gr.;

the third, 5 oz. 17 dwt. 2 gr.; and the fourth, 3 oz. 4 dwt. A crushing of 10 tons was taken out in 1893, and gave only  $4\frac{1}{2}$  oz. of gold. The totals are now:—Stone crushed, 177 tons 12 cwt.; gold, 639 oz. 14 dwt.; average, 3 oz. 12 dwt. 8 gr. per ton.

*The Henry Grattan* crushed 235 $\frac{1}{2}$  tons in 5 lots, averaging 6 oz. 9 dwt. 3 gr. The 1st was 14 $\frac{1}{2}$  oz.; the 4th was 6 oz. 12 dwt. 14 gr.; the last was only 1 oz. 18 $\frac{1}{2}$  dwt. The mine was condemned apparently because it fell short of the promise held out by its first rich crushing.

*The Honest Lawyer* had 14 crushings of 530 tons 14 cwt., averaging 1 oz. 7 dwt. 3 gr. The best (10th) crushing was 4 oz. 11 dwt. 16 gr. The last was 19 dwt. 13 gr.

*The Fourth of July* had, up to December, 1885, 26 crushings amounting to 619 tons 9 cwt., averaging 1 oz. 4 dwt. 1 gr. The first was 6 oz. 3 dwt. 5 gr. The ninth was 4 oz. 8 dwt. 16 gr. Thereafter there was only an occasional crushing under 1 oz., till the twenty-second, twenty-third, and twenty-fourth, which gave respectively 9 dwt. 12 gr., 8 dwt. 1 gr., and 18 dwt. 6 gr. The twenty-fifth gave 1 oz. 14 dwt. 2 gr.; and the last, 1 oz. 8 dwt. 6 gr. per ton. The totals now stand thus:—Stone crushed, 619 tons 9 cwt.; gold, 744 oz. 11 dwt. 8 gr.; average, 1 oz. 4 dwt. 1 gr. per ton.

*The Mowbray* had nine crushings. The amount of stone in the last is not given, but assuming it to be 70 tons 16 cwt. (giving  $\frac{1}{2}$  oz. to the ton), the total is 500 tons, yielding an average of 2 oz. 2 dwt. 7 gr. The last crushing but one was 8 dwt. 1 gr.; the fourth (6 oz. 8 dwt. 22 gr.) was the best.

*The Alliance* had 7 crushings of 174 tons 19 cwt., for an average of 1 oz. 12 dwt. 11 gr. per ton. The best crushing was the 3rd (3 oz. 13 dwt. 19 gr.), and the last (9 $\frac{1}{2}$  tons) was 1 oz. 9 dwt. 11 gr.

*The Empress of India* had 22 crushings of 758 $\frac{1}{2}$  tons, averaging 2 oz. 13 dwt. 3 gr. The 3rd was the best. The last four were all over 1 oz., and averaged 1 oz. 8 dwt. 9 gr.

*The Cornwall and Devon* had 19 crushings of 362 $\frac{1}{2}$  tons, averaging 3 oz. 14 gr. The first small crushing gave 11 oz. 18 dwt. 16 gr. per ton, but the last was only a little over 1 oz., and although the previous one had given 4 oz. 1 dwt. 9 gr., the disappointed holders threw it up.

*The Great Northern* averaged 1 oz. 5 dwt. 2 gr. from 7 crushings of 279 $\frac{1}{2}$  tons. The first crushing (3 oz. 1 dwt. 4 gr.) was the best, but the last only gave 12 dwt., and the mine was abandoned in 1879.

*The Explorer* had, up to 1880, 11 crushings of 629 $\frac{1}{2}$  tons, averaging 4 oz. 9 dwt. 3 gr. The best crushing was the 2nd (8 oz. 15 dwt.). The 9th and 10th gave respectively 3 oz. 3 dwt. 11 gr. and 3 oz. 11 dwt. 4 gr., but the 11th gave only 1 dwt. 22 gr., and the mine, having been taken up by a company with insufficient capital for exploration, was given up. The deepest working was 137 feet. The mine was again worked in a small way in 1886, 1887, and 1888, and the averages of the crushings for these years were, respectively, 2 oz. 7 dwt. 20 gr., 2 oz. 14 dwt. 5 gr., and 1 oz. 10 dwt. In 1892, a crushing of 3 tons gave 2 oz. 6 dwt. 8 gr. per ton. The totals are now:—Stone crushed, 651 tons 15 cwt.; gold, 2,857 oz. 9 dwt.; average, 4 oz. 7 dwt. 16 gr. per ton.



*The Tichbourne* had, up to 1881, 14 crushings of 926 tons, for an average of 1 oz. 17 dwt. 6 gr. The best crushing (2nd) was 3 oz. 14 dwt. 5 gr. The last was only 17 dwt. 9 gr., but the previous one had been 2 oz. 1 dwt. The rich shoot was 64 feet in width, and extended downward for 170 feet. Sinking on the underlie was continued beyond the point where the shoot slanted out of the shaft, but the obvious course of driving from the underlie beneath the lost shoot was not followed. In 1885 and 1886 the mine was reopened, and small crushings taken out, which averaged 1 oz. 5 dwt. 4 gr. and 2 oz. 1 dwt. 23 gr. Nothing has been done since. The totals now stand:—Stone crushed, 958 tons 7 cwt.; gold, 1,828 oz. 2 dwt.; average, 1 oz. 17 dwt. 2 gr. per ton.

*The True Blue*, which is a continuation of the Tichbourne, affords an instance of a second and parallel shoot occurring on the same line of reef. It had four crushings of 33 tons 19 cwt., averaging 2 oz. 6 dwt. 3 gr. The 3rd (3 oz. 11 dwt. 22 gr.) was the best; but on the 4th yielding only 11 dwt. 11 gr. the mine was abandoned.

*The Pioneer* had, up to the end of 1883, 37 crushings of 1,865½ tons, for an average of 1 oz. 15 dwt. 14 gr. The best (3rd) crushing was 5 oz. 17 dwt. 8 gr. The last gave only 8 dwt. 4 gr., and the last but one only 2 dwt. The two previous, however, had given respectively 1 oz. 7 dwt. 10 gr. and 2 oz. 5 dwt. 5 gr. The crushings of 1884 (2) and 1885, and the first crushing of 1886 all gave well over 1 oz. per ton. The second crushing of 1886\* (the last) gave only 16 dwt., and the mine was abandoned. The totals now stand:—Stone crushed 2,033 tons 10 cwt.; gold, 3,759 oz. 9 dwt. Average per ton, 1 oz. 16 dwt. 23 gr. The Pioneer is a continuation of the True Blue (and Tichbourne), and gives an instance of a third rich shoot along the same line of reef. The shoot was worked to the depth of 200 feet. The two poorest crushings were from the bottom of the shaft, and it was assumed that the shoot was lost, without driving or sinking in search of it.

*The Hope* had 9 crushings of 149 tons 3 cwt., for an average of 1 oz. 17 dwt. The first (3 oz. 17 dwt. 3 gr.) was the best. The last was 2 oz. 10 dwt. 22 gr., but the one before had only been 9 dwt. 14 gr. All the stone was obtained either from open workings or from between two shafts 30 feet apart (one of them 160 feet deep), and absolutely no exploration work appears to have been done. The mine has not been worked since 1881.

*The Idaho* crushed, up to 1883, 194½ tons in 11 lots, averaging 1 oz. 9 dwt. 6 gr. per ton. The last three crushings went respectively 3 oz., 2 oz. 16 dwt. 18 gr., and 2 oz. 1 dwt. 7 gr. All the stone was taken from 18 feet on both sides of an underlie shaft 100 feet deep. Why was the mine given up? This question seems to have occurred to someone, who took out a 2-ton crushing in 1886, and got 2½ oz. of gold. But he gave it up, in spite of a yield of 27 dwt. 12 gr. per ton, probably because he was without the means to open up the old workings.

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\* This crushing is from "Pioneer West," and may not have been from the same reef.

*The Maori Chief* had 7 crushings of  $251\frac{1}{2}$  tons, for an average of 2 oz. 9 dwt. 5 gr. They were as follows:—

				Oz.	dwt.	gr.
No. 1	...	...	...	2	19	21
" 2	...	...	...	2	2	20
" 3	...	...	...	2	8	10
" 4	...	...	...	3	10	17
" 5	...	...	...	1	19	8
" 6	...	...	...	1	12	20
" 7	...	...	...	1	7	10

There was a whip shaft 160 feet deep, and the shoot of gold was believed to be little wider than the shaft, and at the bottom only three feet wide. Nothing was ever done to test the existence of parallel shoots since the mine was abandoned in 1879.

*The Kingsborough* is a continuation of the *Maori Chief*, and the crushing returns include those of the prospecting claim and the No. 1 North or Flying Pig. The whole 21 crushings of 1,024 tons 3 cwt. averaged 4 oz. 16 dwt. 15 gr. The P.C. workings were chiefly confined to one shaft between 80 feet and 100 feet deep. Its crushings were—

Tons				Oz.	dwt.	gr.
84	...	average	...	8	18	2
$39\frac{1}{2}$	...	"	...	3	12	11
$73\frac{1}{2}$	...	"	...	1	1	5
16	...	"	...	1	19	8
7	...	"	...	0	12	3
9	...	"	...	1	0	0
$6\frac{1}{2}$	...	"	...	3	5	15

The Flying Pig had workings in five shafts, none of them deeper than 80 feet, so far as I could learn. Its crushings were—

Tons				Oz.	dwt.	gr.
55	...	average	...	19	10	22
83	...	"	...	12	17	17
271	...	"	...	3	5	21
4	...	"	...	1	0	0
$78\frac{1}{2}$	...	"	...	1	13	5
$31\frac{1}{2}$	...	"	...	2	5	18
$14\frac{1}{2}$	...	"	...	2	18	23
$49\frac{1}{2}$	...	"	...	2	15	4
89	...	"	...	2	6	23
5	...	"	...	0	15	0
21	...	"	...	2	17	12
29	...	"	...	1	12	9
14	...	"	...	1	17	20
43	...	"	...	1	14	4

There is, it is true, a considerable falling-off from the first crushing, but the worst is by no means poor. The workings extended 168 feet over the surface of the Flying Pig Claim, and how far over the prospecting claim my notes do not say. Yet a shaft about 100 feet deep, and a block shaft 200 feet deep, but not deep enough (in the No. 2), are all that have been done to prove the extent of an exceptionally rich reef.

the carriage of machinery and the necessaries of life was almost prohibitive. Crushing, in consequence, was three times as costly as it would be now. Carting to the nearest mill was too costly, except for rich stone. The carting of firewood and mine timber was very expensive. Food for men and horses was sold at prices suggesting a city in a state of siege. Finally, the cost of labour was necessarily ruled by the expense of living.

Disheartened by these drawbacks, the miners, as one after another they exchanged the "flush times" of 4-oz. stone for the poverty of  $1\frac{1}{4}$  oz., became stricken with the conviction that "the Hodgkinson reefs don't go down," and began to think of clearing out. It was a most unwarrantable conclusion, as no attempt was made to prove the imagined negative. Many mines were abandoned in spite of the fact that poor crushings had been succeeded more than once by rich. The deepest shaft (Tyrconnel) is only 414 feet.

At the present day the drawbacks referred to hardly exist. A railway has been brought to within thirty-five miles of the centre of the field, doing away with the difficulty of the "Coast Range." Every form of mining and gold-saving machinery is cheaper and more efficient, and the expense of putting it on the ground is a mere fraction of what it cost in the old times. Foodstuffs only cost a tithe of the famine prices of yore. Every item of expense—carting, crushing, timber and labour—is lessened.

The figures speak for themselves, and if they were not authentic official records they would strike one as incredible. The agents of capitalists are running all over the world looking for mines such as have been abandoned on the Hodgkinson by the score. Had the field been discovered at the present day, there would have been no half-hearted working of the mines, and the Hodgkinson would probably take rank well in front as a gold-producing district.

The majority of the mines on which I have made notes are still open to the first-comer, or are held by miners who are anxious to treat with persons willing to risk money in their development.

Maytown, 3rd September, 1896.

13

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